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PREFACE

As a British military officer studying at a United States professional military education establishment I have been extremely fortunate to benefit from the exceptional learning and developmental opportunity offered. I would extend my thanks to all of the faculty and support staff at Air University who have made this such an enlightening and productive year.

I have served alongside the United States military, provided direct offensive support to US personnel in contact and have absolute respect for the man and woman in arms. In observing and studying the US political and strategic culture over the past 12 months I have, however, felt an element of unease about the Grand Strategic journey that the West is undertaking in contrast to our preparedness. US military personnel and organizations have proved incredibly willing and able to adapt to the conflicts that they have faced over the last 13 years, however, I believe that the right lessons have not been learned and that the future environment will be less forgiving. I believe strongly that the future operating environment will be inherently hybrid and will offer little, if any, utility for military force in its contemporary guise. Unless we are able to grasp the implications of this from the grand strategic to the tactical level we are setting ourselves for failure. My hope is that a 9/11 style commission will not reflect on our failings, following some future catastrophic event, but that we will recognize in advance that a defense transformation is too narrow an undertaking- a transformation of our foreign policy ends, ways and means across government is wholly more appropriate.
ABSTRACT

Recent global societal trends will have a significant effect upon the utility of force as an arbiter in international affairs. Furthermore, in seeking to transform its defense establishment post wars in Afghanistan and Iraq, the US Department of Defense (DoD) has missed critical lessons. To maintain a position of significant influence in the world the United States DoD must better integrate with other governmental departments to achieve Unity of Effort. The future operating environment, characterized by the empowerment of the individual and a diffusion of power, will be an extremely challenging hybrid environment for traditional military organizations; force will increasingly be seen as counterproductive and the point of pressure for compellence will no longer be solely states. Compounding this problem is the recognition that this environment is no longer a tame problem set but a wicked problem. The path to improvement lies in recognizing that the linear, deterministic, military problem solving processes used today must be consigned to history. Whole of Government planning groups at the operational level of war will be an essential feature for successful future operations to ensure that the framing of the problem in Phase Zero is more complete, and the balance between development, diplomacy and defense is more equitable and appropriate.
Introduction

Since the collapse of the Berlin Wall and the partition of the monolithic threat that the United States had organized, trained and equipped to face, there has been a series of military campaigns that have tested the United States’ conception of when and how to use military force. Conflict in Libya, Syria and now Ukraine has presented similar yet uncomfortable truths to the United States in determining how to apply the military instrument of power. Current assessments of future world trends only seek to exacerbate this challenge due to shifts in demographic trends, the relative rise in influence of Asian powers and greater global interdependence. The conflicts that the Department of Defense (DoD) might expect to contest will be hybrid, fought at range and in complex terrain. While fiscal pressure will drive down DoD budgets and pair down capability, the United States will remain the world’s pre-eminent military power by a country mile. As in Vietnam, however, the United States may be posturing to win every kinetic engagement but lose the war.

In order to deliver Unity of Action and Effort, the United States DoD needs to fundamentally alter its structure and conceptual approach at the operational level of war to succeed in solving the wicked problems that future conflict will present. Learning the lessons from a decade at war and breaking the shackles of a Cold War institutional construct, the US must operationalize cross-departmental cooperation to positively shape its security abroad. As the Wehrmacht operationalized all-arm tactics to decisive effect in battle, so too the United States must institutionalize the interagency approach at the operational level of war to bring all of the facets of state power to bear, in context. The synergy of developing cross departmental
operational strategy offers the United States the flexibility in thought and deed necessary to achieve the ends of its Grand Strategy in a contested, complex future.

To demonstrate how this could be done it will first be critical to assess the future operating environment and articulate the key failings in the current posture of the DoD. Following a clear description of the physical environment that the DoD will have to affect it is critical to discuss the conceptual challenge that the United States’ faces in actually framing future wicked problems, divining strategy and determining solutions. Finally, a review of the current interagency process and doctrine will highlight the need for reform to better integrate, synchronize and focus the instruments of state power to meet the coming challenge. In conclusion a series of recommendations will follow, centered round the requirement for a Defense Reorganization Act, as in 1958, to posture the United States conceptually and physically to meet the challenges and opportunities that the future holds.
The contemporary and future operating environment that the United States DoD faces is one that it is currently ill equipped to affect positively. There is a distinct danger that, as if conducting keyhole surgery with an axe, it acts in good faith but with wholly the wrong ways to an undesirable end. The recognition that the nation whose military budget is larger than that of the combined total of the next 12 states,¹ most of whom are close allies, has limited military options in conflicts of direct security interest ought to serve as a warning for the future application of force. Despite the Secretary of Defense, Secretary of State and the Chairman of the Joint Chiefs of Staff clearly articulating the unequivocal threat that Syria’s use of chemical weapons posed to US interests, influence and security, no military option was palatable.² Lest the reader be concerned that I will advocate that small wars are the future pattern of warfare that the United States will contest, the recent annexation of sovereign territory in Ukraine by Russia highlights that near peer competitors, and realpolitik, are an equal threat to security. In either scenario, the use of conventional military force appears unpalatable and the threat holds similar traits across the range of military operations that must be understood by the military professional. Analysis by the National Intelligence Council in 2012, JFCOM in 2010 and the Director of National Intelligence in 2013 all point to the increasing complexity of the security threat juxtaposed against a declining utility of large conventional forces. While Clausewitz described war as a duel on a grand scale,³ the complex interdependence of states and the dual use nature of

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**Conducting keyhole surgery with an axe**

_if this name (Unrestricted Warfare) becomes established, this kind of war means that all means will be in readiness, that information will be omnipresent, and the battlefield will be everywhere. It means that all weapons and technology can be superimposed at will, it means that all the boundaries lying between the two worlds of war and non-war, of military and non-military, will be totally destroyed._

- PLA Cols Qiao Liang and Wang Xiangsui _Unrestricted Warfare_

The contemporary and future operating environment that the United States DoD faces is one that it is currently ill equipped to affect positively. There is a distinct danger that, as if conducting keyhole surgery with an axe, it acts in good faith but with wholly the wrong ways to an undesirable end. The recognition that the nation whose military budget is larger than that of the combined total of the next 12 states,¹ most of whom are close allies, has limited military options in conflicts of direct security interest ought to serve as a warning for the future application of force. Despite the Secretary of Defense, Secretary of State and the Chairman of the Joint Chiefs of Staff clearly articulating the unequivocal threat that Syria’s use of chemical weapons posed to US interests, influence and security, no military option was palatable.² Lest the reader be concerned that I will advocate that _small wars_ are the future pattern of warfare that the United States will contest, the recent annexation of sovereign territory in Ukraine by Russia highlights that near peer competitors, and _realpolitik_, are an equal threat to security. In either scenario, the use of conventional military force appears unpalatable and the threat holds similar traits across the range of military operations that must be understood by the military professional. Analysis by the National Intelligence Council in 2012, JFCOM in 2010 and the Director of National Intelligence in 2013 all point to the increasing complexity of the security threat juxtaposed against a declining utility of large conventional forces. While Clausewitz described war as a duel on a grand scale,³ the complex interdependence of states and the dual use nature of
state infrastructure, specifically space and cyber assets, means that the game of Russian roulette, rather than a duel, may be a better metaphor for future warfare. An analysis of Clausewitz’s trinity may yet direct us to one cause of the problem.

**Force as a means to compel in a Trinitarian construct.**

Clausewitz’s trinity of the government, military and the population allows us an interesting point of reference for changes in the conduct of war over the last 2 centuries. Clausewitz’s period of study under Scharnhorst at the turn of the nineteenth century allowed him to observe a social revolution in military affairs, the *levée en masse*, and was to prove the genesis for his understanding of the competing elements of the trinity in war. Clausewitz’s *On War* opens with a definition of war as the use of force to compel an adversary to do our will; as the continuation of politics by other means, war is the use of force by one government to compel another to act. Because *On War* was written against the backdrop of conflict in the Napoleonic era, it largely captures what today we describe as the “direct approach” in emphasizing force-on-force engagements to achieve decisive results. Of the 3 “legs” of the trinity, the defeat of the military was seen as the primary objective to compel an adversary government. In limited war, states fought set piece military battles to determine through the clash of arms the victor and hence resolve limited disputes.

The cataclysm that was the slaughter on the Western Front, however, led to alternate theories of warfare gaining favor. Liddell-Hart and Douhet both promised success in a more “indirect” fashion and at much less cost. Critically, the theorists of the inter-war years considered the bypassing of the large fielded forces of an adversary and the targeting of the alternate legs of the trinity, the government and the population, to compel an enemy to acquiesce. Napoleon’s
levee en masse had brought the population onto the battlefield and therefore made the population a critical aspect of state desire to wage war for political ends; technology and theory now combined to allow the battlefield to extend all the way back to a state’s domestic population. The ascendance of airpower and the development of western technology in the late twentieth Century promised to precisely strike at enemy schwerpunkt and prove decisive, as evidenced in the theories of John Warden and by Coalition operations in Operation Desert Storm. The center of gravity had shifted from the military to the population, albeit the prime actors were still states.

While President George W Bush claimed “by a combination of creative strategies and advanced technologies, we are redefining war on our terms,” he failed to recognize the nature of warfare as a contest between reacting adversaries. Whether through an observation of US military strength, unrelated advances in information technology, or any other string of circumstances, the environment in which the United States sought to apply force had changed. The critical point of pressure in the trinity had shifted from the military to the population. The constant, however, was that a state government was still responsible for decision making and hence the actor for military force to compel. Afghanistan post 2001, Iraq 2003 and Lebanon 2006 are important points of reference for the continuity and change that the future operating environment threatens.

Eigentliche Krieg- war as it actually is.

The opening paragraph of Sir Rupert Smith’s The Utility of Force is prescient as it was written during the unraveling of stability in Iraq in 2004. It resonates doubly as he has combat experience in command at the tactical, operational and strategic levels of war.

War no longer exists. Confrontation, conflict and combat undoubtedly exist all round the world…and states still have armed forces which they use as a symbol
of power. None the less, war as cognitively known to most non-combatants, war as a massive deciding event in a dispute in international affairs; such war no longer exists.  

Smith argued that a paradigm shift has occurred in the conduct of warfare and coined the phrase “war amongst the people.” He rightly argued that war is no longer the sole preserve of states but is fought amongst populations and not on open battlefields; is fought by populations and not solely militaries and critically, the *schwerpunkt* was the people and not the government. Smith, however, is not the sole harbinger of a dangerous and limited future for conventional military forces. Documents such as the National Intelligence Council’s (NIC) *Global Trends 2030: Alternative Worlds* offer an insightful set of future scenarios and echo the trend of *war amongst the people*. The scenarios evolve as future US administrations interact with global mega-trends hence their outcome is not pre-determined. What is clear and determined are extrapolated changes in “our way of life” hence challenges the DoD will face in averting or conducting conflict. While the sources of future conflict are unchanged from those observed throughout history of energy security, access to food and water and disparities in demographics, the continued paradigm shift to *war amongst the people* comes in the form of individual empowerment and the diffusion of power. While they may seem innocuous, their implications are far reaching for those concerned with security. Most importantly, they shape our appreciation of what Clausewitz termed *eigentliche Krieg* (war as it actually is) in the contemporary and future environment.  

In his seminal work, *The Future of Power*, Nye uses a simple analogy of a three-leveled chessboard that will form a useful tool for discussing the NICs challenges of individual empowerment and power diffusion. The first level on the chessboard is the zero-sum competition between states, largely played out through their military instrument of power, to coerce other
states directly and in which the United States is currently unchallenged. The second level on the chessboard is the economic balance of power between states which is multipolar and where there is more incentive to cooperate than to compete. The third and final chess-game is the domain of actors below the state and where power is completely diffused. Of critical importance to the analogy is that activity takes place on all three levels at once, yet no one level has predominance. While unipolarity may exist in the military realm, the other two levels cannot be coerced by this hegemony. Paradoxically, were military power to be wielded without the consent of the majority of other actors, it would resonate on the other two levels through changes in behavior between actors to punish or annul the influence of an overly realist approach. Where a state lacks the resource to contest militarily, it can devise strategies to allow it to meet its ends through the “lower” planes of the chessboard. While the analogy may seem rather conceptual, it does serve as a simple metaphor to explain unraveling events in Ukraine where a state is acting using force alone, and the international community is responding using the two lower planes. As a metaphor for our increasingly interdependent world model, it highlights significant implications.

The first critical takeaway is that regardless of any potential change in relative power between the US and a near-peer competitor, the complex interdependence between states and sub-state actors are areas that traditional military forces cannot influence yet where many of the future points of influence and leverage will exist. Indeed, the PLA think-piece *Unrestricted Warfare* and the slogan of rising of Meji Japan in the 19th Century both advocate a policy of “rich nation, strong army;” the very practice of integrating oneself into the international interdependent environment will secure influence and allow the attainment of leverage. Being outside the international system means being unable to pull the levers needed to influence other actors and hence shape the narrative. The second critical takeaway is the growing relative ability
of the individual and of non-state actors to influence events, potentially unchecked. It may well be that the social revolution in military affairs that so challenged Scharnhorst and his contemporaries was only the first wave of what we have seen recently in events such as the Arab Spring. On the subject, Clausewitz observed “It follows that the transformation of the art of war resulted from the transformation of politics. So far from suggesting that the two could be disassociated from each other, these changes are a strong proof of their insoluble connection.”

Developments in information technology, the diffusion of power and the empowerment of the individual may not make as catchy a rallying cry as to liberté, égalité and fraternité, however, they may prove to be as great a challenge to the established relations between great powers.

**The end of the state’s monopoly on compellence.**

Synthesizing the two critical takeaways, future attempts to compel actors will be conducted by non-state actors using non-traditional means but potentially with devastating effects. With greater global instability due to demands for resource, proliferation of WMD, greater global interdependence and the presence of rogue non-state actors the future utility of our current force construct looks continually limited. While conventional military forces will still compete on the first layer of the chessboard, the real competition will be conducted on the two levels below. Where military force is used it will undoubtedly be targeting the symptoms and not the causes of crisis, as these will be related to questions of popular legitimacy; in this environment, force will increasingly be seen as illegitimate and disproportionate. The shift in the critical point of pressure on the trinity to the population, and the trend towards the empowerment of the individual will be significant challenges for conventional military forces as there may no longer be a state actor to compel. The United States will need to carefully consider its balance of
resource allocation across government departments to ensure that it is postured to treat the causes of the security threats that it will face and not just deal with the inevitable conflict that will erupt.

While erroneously titled *A Master Plan to Destroy America* in the published translation, PLA Cols Qiao Liang and Wang Xiangsui’s *Unrestricted Warfare* would appear to be an articulate vision of our near future and presents uncomfortable reading. If the United States does not reconsider the weighting of emphasis on the instruments of power it will lose traction on the lower 2 levels of the chess-board of international affairs whilst holding a significant military capability unable to leverage influence. Indeed, the military instrument of power which the United States is backing to resolve its disputes may prove to be a constraint if it is wielded and fails to achieve its ends, as Iraq and Afghanistan have shown. Other states, or even its own population, may dictate that the United States re-cages its military instrument and therefore denudes it of influence abroad.

We must be cognizant that force as an arbiter of dispute in future will be seen as a nineteenth century solution to a twenty-first century problem; in fact, the United States and European Union are using this very language in describing Russia’s activity in Crimea.\(^1\) Even where we have a genuine malady, force is viewed in the developed world as a last resort or blunt instrument, like an axe. Precise engagement is essential to meet the core issues that underlay any dispute, akin to key-hole surgery. A desire to compel through force, while tempting, will have decreasing utility and be increasingly difficult to apply in a world characterized by interdependence and power diffusion and populated by empowered individuals.
Framing the problem and therefore the solution, differently

*There is always a well-known solution to every human problem- neat, plausible and wrong.*

- H. L Mencken
*Prejudices, Second Series*

The current and future operating environment that the United States will attempt to shape is a “wicked” problem and must be accepted as such. Important therefore to determining how best to physically compel adversaries and influence future events is an exploration of the nature of a wicked problem to enable us to address the related conceptual challenge that we face. The classification of a problem as wicked traces its roots back to an essay in the early 1970s entitled *Dilemmas in a General Theory of Planning* by two American urban designers and planners, Horst Rittel and Melvin Webber. In their paper, they sought to highlight that scientific bases for resolving planning issues on social policy, such as new infrastructure projects, were flawed. The critical element to Horst and Webber’s work, as it relates to the military professional, was that problems which involve shaping “open” societal structures, such as compelling an adversary, are inherently different to the deterministic and linear problems that engineers face in solving “closed” problems. Any attempt to apply scientific principles to societal issues is flawed as the entity that you seek to affect is not static but is responding and actually adapting to your interaction.

As Basil Liddell Hart observed nearly one hundred years ago, “an important difference between a military operation and a surgical operation is that the patient is not tied down. But it is a common fault for generals to assume that he is.” Whilst the major interstate wars of the twentieth century involved extremely detailed logistical planning to project and sustain enormous armies over extended distances we must be wary not to be lulled into fuzzy-thinking.
The types of problem solving skill needed to prepare for an operation such as Odyssey Dawn are extremely impressive and rely on just-in time processes to make every moving part interface. Critically, however, resolving the root causes of a hybrid conflict is a fundamentally different challenge to populating a time-phased force deployment data chart. The later problem is closed and can be resolved with spreadsheets and data; the former is an open system and demands to be treated differently. Understanding and addressing the forces which were unleashed by the Arab Spring in Libya is a wicked problem, and we risk only applying a single process to two dichotomous types of challenge. Problems which involve conflict resolution are wicked, not in the sense that their nature is malevolent, but in the sense that they are challenging, elusive and cannot be resolved by a formula or template.

**Wicked by name, wicked by nature.**

The friction and chance that Clausewitz observed in the field are elements of a wicked problem and go some way towards explaining their complexity, however, a fuller appreciation of Horst and Webber’s observation will allow us a clearer potential path to changing our approach to wicked problem resolution.

1. There is no definitive formulation of a wicked problem.
2. Wicked problems have no stopping rule.
3. Solutions to wicked problems are not true-or-false but good-or-bad.
4. There is no immediate and ultimate test of a solution to a wicked problem.
5. Every solution to a wicked problem is a “one-shot” operation; because there is no opportunity to learn by trial and error, every attempt counts significantly.
6. Wicked problems do not have an enumerable set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan.

7. Every wicked problem is essentially unique.

8. Every wicked problem can be considered to be a symptom of another problem.

Table 1. Horst and Webber’s characteristics of a wicked problem

Horst and Webber’s characteristics of wicked problems, as articulated as a list at Table 1 above, give a clear appreciation of the failings of approaching their resolution in a linear fashion. As the problem does not have clearly defined boundaries; lacks an obvious resolution statement, and can only be made better or worse but not be solved, deterministic linear problem solving methodologies will not be successful. An important risk is that by oversimplifying the issue and failing to recognize its true character, they will make things worse and will place us in a poor position to apply resource. Perhaps the best example of this in recent military affairs is the performance of the military coalitions in Iraq and Afghanistan. The combination of systems analysis, high-technology and exponentially better trained forces led to decisive victory over the fielded military opposition at an unprecedented tempo and precision. However, as both conflicts exhibited wicked characteristics, the decisive victory sought actually led to the unleashing of societal forces that the West has struggled to understand and hence control. The linear systems-based planning methodologies used by military planners set boundaries on a wicked problem hence the subsequent confusion when the adversary did not follow the deterministic predicted model. The planning process that could deliver batteries from Baltimore to Baghdad, was ill-suited to tackling a complex adaptive system. Had we recognized that our current operating
environment was a wicked problem, we would have recognized that the clear cut victory that we sought cannot exist.

**Getting to good enough.**

Critical to tackling a wicked problem is recognizing that the process will be iterative, will be based on incomplete information, and will not provide a complete solution. The very nature of a wicked problem determines that the chosen course of action will only lead to a position where a *satisfactory* end state is achieved. The actual achievement of a *mission accomplished* milestone will not exist, however, problem owners, such as the POTUS, may see that the problem has been tackled to a satisfactory degree to declare it resolved. In truth, the problem will not be resolved but will have been managed to a position where we feel the sacrifice of further time, cost or life will not achieve a *better* end state. For this very reason, the common criticism of shifting strategic end states by political leaders begins to look a little unfair; in actuality, the actions of political leaders to declare a satisfactory end state and shift the goalposts is a recognition that the problem is indeed wicked. As there is no *stopping rule*, Boyd’s OODA loop of iterative reaction with a decision would appear to be the best avenue of approach for a wicked problem. While traditional problem solving mechanisms such as the Military Decision Making Process or Joint Operational Planning Process are useable at the operational and strategic levels when we considered the adversary to be a closed system and force-on-force to be a valid concept, we must reassess their utility in future hybrid warfare. A linear process which allows the concrete movement of troops from A to B may have utility if our conception of strategy is the massing troops of troops for the battlefield, however, the future operating environment will punish such a deterministic approach to the application of force.
Satisficing or muddling through, while anathema to military planners who are looking for clear measurable outcomes, may be the reality of interacting with wicked problems. More fully described as the Bounded Rationality and Incremental models of decision making, both models offer a way forward for military planners to accept their environment and attempt to apply solutions. Critically, both models accept that proposed courses of action will not achieve the end state but will interact with the problem and deliver an outcome. As the environment is an open system, the actor can determine whether the outcome is good enough, or whether it is simply an incremental step towards the longer term goal and therefore further interaction is required. Essential to either model is recognizing that social fragmentation is a critical element of social problems. As wicked problems are societal challenges they undoubtedly have a variety of stakeholders working towards their resolution. In a US road building project this may be the city council, local population, federal government and regional industry; in Afghanistan the stakeholders are the sovereign states committing troops to ISAF, the GIRoA, a plethora of NGOs and even the opposing factions. In adopting an incremental approach or seeking to satisfice, a significant challenge is adopting a common understanding of the problem. With fragmentation amongst stakeholders, individual actions will lead to incoherence and further complexity in understanding the adaptation of the open system to stimulus. Not only is the future operating environment a wicked problem, but incoherent attempts to resolve the issue will further complicate the problem and make a satisfactory outcome harder to achieve.

Strategy with a small “s.”

Wicked problems are not insurmountable, and a path towards tackling them is articulated by CEO and futurist Peter Schwartz in The Art of the Long View. As wicked problems are not unique to the military, alternate perspectives are essential to a broader understanding of both
their nature and potential resolution. Schwartz describes a process for tackling uncertain environments as a strategic conversation. Based upon his work in scenario building for multinational corporations, Schwartz highlights that the social complexity that we advocate as a restriction in the shape of fragmentation may also be our greatest strength. While there will be divergent understandings of a problem within any large organization or community facing a challenge, their disparate perspectives, if captured, offer a more complete picture of the problem. As strategy in the broadest sense is merely a conceptual scheme of “ends, ways and means for making progress towards broad and abstract aims,” a strategic conversation is therefore sharing that concept and inviting participation. As the problem is wicked in nature, a strategic conversation will not deliver a complete model as there is neither a definitive problem formulation nor stopping rule. However, in bringing together divergent positions we go from a single dimensional to a multi-dimensional perspective on the problem and can articulate more varied and therefore more likely courses of action which will satisfice. The maxim that “If you carry a hammer problems look like nails” is validated by Horst and Schwartz’s work; a group of differing tradesmen carrying different tools will offer a more complete opportunity to problem resolution. As in any process of design, we must build a deep understanding of the current environment to determine what we are unhappy with to then allow us to marry this with a desired future environment. Schwartz’s contention is that social complexity is a significant determinant to achieving this.

In applying design, we build a series of scenarios that link our current and desired conditions and therefore we draw a path that might allow us to muddle through the problem in iterative steps, attempting to remain within measurable guiderails, to achieve a satisfactory end state. Essential to resolution is both a continuous strategic conversation to challenge our
understanding of the problem and social complexity in the team providing both inputs and applying themselves to the challenge. Resolving wicked problems necessitates team-work across divergent stakeholders, both in framing the problem and owning its resolution. For the military planner the critical takeaway is firstly, that where wicked problems require the state to consider using force to resolve them, multiple stakeholders must be consulted to prevent all problems looking like a nail. Secondly, they require more than just a strategic conversation but also broad participation to ensure that disparate stakeholders own part of the solution to the problem. While some might argue that we already have a Whole of Government approach, (WOG) the current conceptual and institutional framework is insufficiently robust to meet the rigors of the future operating environment.
Reconfiguring for Phase Zero

Fighting a war to fix something works about as good as going to a whorehouse to get rid of a clap.

- Norman Mailer
The Naked and the Dead

The current and future environment that the United States DoD will have to influence is an open system and therefore demands a different conceptual approach and institutional framework than that which faced the USSR. While post 9/11 it is apparent that the United States appreciates that security is much more than defense, the well-intended push towards inter-agency cooperation is not being met with enough concrete activity to be effective. Just as the Goldwater-Nichols Act was needed to move the US military from deconfliction to full synchronization and integration, so a similar process is essential to allow the United States to adequately integrate its instruments of power (IOP). This assessment is not based on a desire for efficiency but one of absolutely necessity, as the wicked problems faced today by the DoD necessitate socially complex (interagency) planning groups to frame the problem, advocate workable solutions and then execute those solutions coherently. Were a more concrete argument needed for a Realist, the United States’ competitors for international leverage and influence are already investing heavily in what I earlier termed rich nation, strong army strategies and will find asymmetric advantage at the expense of the United States. Not reconfiguring means falling behind at best.

Anti- Access, Self Denial.

As an example of the myopia that a preponderance of power in one IOP generates, it is instructive to look to the US military’s approach to future anti-access threats. As a power projection nation, the United States relies on the global commons for speedy deployment to crisis
zones to exercise military deterrence. However, there is a growing concern in the United States over the rise of regional powers, such as China and Iran, and therefore an anti-access area denial (A2AD) strategy by the United States’ competitors to prevent her exercising military hegemony. It would be fair to assume, based on the preponderance of literature, that the US military is expending a lot of time and money on this challenge when in fact it is undoubtedly hardening the perspective, in states like China, that the United States is more interested in hegemony than cooperation. Against any existential threat, a state would be right to harden its defenses and seek an asymmetric advantage, hence the Chinese further invest in their A2AD capability, and so the security dilemma increases.

A broader interagency approach would offer differing perspectives and therefore opportunities to resolve the issue of access to the global commons; as we described earlier, if you are armed with a hammer, problems often look like nails. What if we changed the A2AD acronym and devised a US strategy to bring partner nations on board and invest in their own ability to provide for collective defense? Assured Access, Allied Defense would undoubtedly be a viable and alternate strategy, with Department of State (DoS) and US AID support, and would offer an alternate with significant synergies in defense, development and diplomacy (3d). With United States access assured at forward locations through collective defense treaties with partner nations, the United States could foster deeper economic integration with South East Asian partners and seek to draw China into an interdependence that would meet its aims. In terms of a strategic dialogue with China it would mean not offering them both a carrot and a stick, as we do at the moment, but would allow a much more coherent strategic narrative for them to comprehend. Most importantly, it would allow the United States to hold dialogue with regional actors rather than being seen as an outsider reaching-in. While A2AD is a simple
example, it is demonstrative of the fragmentation that we described as being a complicating factor in wicked problem resolution and is prevalent in US Government circles today. If the United States wants Unity of Action to be anything other than a bumper-sticker slogan, then it must act to establish unity of effort across the whole of government.

**Division is baked into the plan.**

As the United States government is designed around the principle of the separation of power, it would be naïve to expect that close interagency cooperation would be institutionalized as it is in fact counter to the design of the system of government. However, since the 1940s successive Presidents have attempted to bind their IOPs more closely together to meet foreign policy objectives and have had success at the Grand Strategic level. The National Security Council (NSC) and its sub-committees is an excellent example of allowing a strategic conversation to percolate up and down an organization to attempt to gain a holistic view of issues. Critically, however, all of that interagency cooperation still occurs at the Grand Strategic level. If one steps down the DoD to the Geographic Combatant Command (GCC) at the operational level of war, government agencies no longer build a holistic view of problems but provide liaisons between departments and stove-pipe activity through their own chain of command.

For the GCC his guidance emanates from the Unified Command Plan (UCP), Joint Strategic Capabilities Plan (JSCP) and Guidance for the Employment of Forces (GEF). All three documents are written with minimal consultation out-with DoD and therefore do not incorporate any opportunities to generate synergistic effects. With military officers reviewing military guidance it is perhaps not surprising that problem-framing and resolution is largely bounded by
their military expertise only. In articulating his frustration with the command and control of US forces during the Second World War President Truman made the following observation:

"We must never fight another war the way that we have fought the last two. I have the feeling that if the Army and Navy had fought our enemies as hard as they fought each other, the war would have ended much earlier." 27

Unlike Truman’s observation, the level of discord between agencies today is more akin to coalition partners with broadly diverging objectives than enemies, however, interagency cooperation is neither institutionalized nor active below the strategic level. A major challenge is the political culture of the United States as reflected in its Congressional Law. Through both the documents highlighted such as the UCP and the United States Constitutional Codes, the departments of government and even sections of the armed forces, such as the Bureau of the National Guard, are granted authorities separately. While this system of codified separation exists, significant restrictions will be placed upon the United States’ ability to wield its IOPs in international affairs. As one of the characteristics of future warfare is the increasing prevalence of dual-use systems in space and cyber, some form of change in the law will be needed to allow timely unity of effort.

**An operational level issue.**

Were the desire to improve interagency cooperation a wicked problem, we would advocate that the critical disparity between our current observed system and our desired system was firstly, the ability to articulate a coherent strategic narrative and secondly, the ability to subsequently apply a coherent package of activity across IOPs. Were we to scenario set and compare COAs for satisficing our problem, the obvious area for focus would be at the operational level. At the Grand Strategic level a form of dialogue already exists, however,
strategy is not created in a vacuum but in the cauldron of the nation’s capital with all of the competing equities. At the tactical level there is an excellent appreciation of the grassroots challenges but a lost view of the horizon and hence the broader strategic picture. At the operational level of war decision makers have the benefits of both proximity and distance from the pros and cons of other levels hence are best placed to coordinate resource and information. At the Grand Strategic level very broad concepts are managed, while at the tactical level infinite and concrete detail is prized. The operational planner is critical in accepting the grand strategic vision and, appreciating the concrete tactical reality, determining the ways and means to turn concept into concrete activity. Operationalizing cross departmental activity is the fulcrum for success.

Paradoxically, it is at the operational level where the disparity between US Government departments is the greatest yet the opportunity for synergy exists most. I have already mentioned the NSC and the coordination conducted in Washington DC, and the lessons of 13 years in Afghanistan and Iraq have demonstrated the benefits of Provincial Reconstruction Teams and integration at the tactical level. At the operational level the coordination between agencies is akin to the pre-Goldwater-Nichols Act military deconfliction that has been consigned to history.

**Doctrine as an authoritative guide?**

One of the most significant challenges to interagency cooperation is that while current doctrine expounds unity of effort, it does not resolve the core challenges of fragmentation and institutional bias that are essential to tackling wicked problems. Critically, *Joint Publication 3-08 Interorganizational Coordination during Joint Operations* recognizes 2 forms of interagency coordination. Firstly, it describes a Whole of Government approach as a mandated activity from
the NSC or its Homeland Security equivalent to bring all arms of government together to resolve a particular challenge.28

The second form of coordination is routine and is differentiated in JP 3-08 in bold for parenthesis with the following statement:

Whole of Government planning is distinct from the contributions of USG departments and agencies to DoD planning, which remains a DoD responsibility.29

It is undoubtedly for exactly this reason that interagency coordination is so haphazard and conducted at so late in the planning process. US joint doctrine advocates that, while organizations such as Joint Interagency Coordination Group (JIACG) are necessary, any other coordination is at the relevant military commander’s whim. Whilst it may sound a little *Rumsfeldian*, this does not account for *known-unknowns* as it denies a wicked problem a broad strategic conversation and the social complexity needed to understand it. The JIACG is a coordinating function in a GCC and not a detailed planning and problem framing group; it has no command relationship with sub organizations and might add an appendix to a plan to demonstrate effort, however, this is the equivalent of the token inter-service coordination conducted pre-Goldwater- Nichols. True interagency coordination would make the ad-hoc Whole of Government approach a permanent activity and allow, at the operational level, the coordination of all IOPs to decisive effect. If it were a commodity truly valued by the DoD the section on Whole of Government in JP 3-08 would encapsulate all interagency cooperation. Critically, it would enable a strategic conversation to frame the problem and understand it fully before determining the best response. As doctrine is authoritative, it is clear that outside crisis response activity, the interagency is not tasked with nor equipped to tackle the threat.
Cross Departmental Operations in Phase Zero.

As recent operations and international crises have demonstrated the limits on the utility of military force the DoD must act to take ownership of the problem. To be doctrinal, the US military must cooperate more effectively in Phase Zero to shape positive outcomes. However, rather than allowing individual departments to determine its own Phase Zero planning, the United States government must institutionalize planning at the operational level of war. The process which JP3-08 currently describes as a Whole of Government approach must cease as an ad-hoc activity and be adopted as normal business to allow the United States to adequately face the challenges of future conflict. The rubicon that the United States has crossed in recognizing that Homeland Security provision necessitates more than just disparate activity by government agencies highlights that the cultural and institutional tendency to specialize can be overcome. The social complexity advocated earlier for wicked problem resolution, rather than the fragmentation or last minute integration that currently exists, must become the norm of planning groups. Similarly, the adoption of operational design rather than linear deterministic planning methodologies must evolve to allow the monitoring and framing of more complex problem sets.

Rather than holding significant military forces at readiness that cannot be employed effectively, the United States must better rationalize its allocation of resource across its diplomatic, development and defense arms to ensure that it is has the tools for the tasks at hand. Were a narrow defense transformation to be completed, the United States military may find itself better equipped but no better oriented to deal with the threat environment. As the future environment will be a complex mix of competition and cooperation, a more equitable balance of means will be essential to give the United States the leverage that it needs to tackle the challenges on the second and third layer of Nye’s chess-board. With every challenge comes
opportunity; rationalizing its expenditure on diplomacy and development would significantly improve America’s ability to shape affairs in contested regions through focused initiatives by the DoS and USAID to tackle the root causes rather than symptoms of the world’s hotspots. Rather than tackling the inferno, a more equitable balance of resource would enable the US to tackle the problem at source. With a diffusion of power and individual empowerment as future challenges, assisting in the advocacy of democracy, education, security sector reform and open markets for investment will be critical tools in any future War on Terror.

Finally, as the United States is a nation which must project itself to gain leverage abroad, a more equitable balance of resource and a focus on a new comprehensive government approach at the operational level will gain the United States a significant lever in dispute resolution: understanding. Through the development of diverse all-of-government teams with regional focus the United States has the potential to build civil led expertise with a deep understanding of their problem sets. Through a deep understanding of their environment, diverse planning teams have the greatest potential to apply smart power to a developing issue to shape their environment to meet United States’ interests. As the operationalizing of all-arms tactics conferred a significant advantage to the Wehrmacht in 1939, so too are we offered an opportunity to draw a critical lesson from the wars of Iraq and Afghanistan. Operationalizing cross departmental integration may yet offer the United States the decisive edge that it needs to maintain advantage over peer competitors and spoiling adversaries in a future contested environment.
Conclusion

From their ignorance of how to do what they ought, (they) are naturally led to do what they know.

- Maurice de Saxe
  *Mes Rêveries*

Predicting the nature of future warfare and therefore the preparations needed in advance is undoubtedly a pastime as old as war itself. The challenge for the statesman or military planner advocating transformation is getting close enough to the projected future to be effective while not risking being too far from the potential alternates. In characterizing the future face of warfare it is essential that we maintain a strong recognition of the unchanging fundamentals of *eigentliche Kreig* and do not mask it for what it is not. In drawing conclusions on the future challenges that the DoD will face I adopted the mechanism advocated by Schwartz’s *Art of the Long View* in attempting to extrapolate forward from current trends and predict what their implications might be for the future. In drawing a line of reference through Afghanistan, Iraq, Libya, Syria and Crimea forwards to *Global Trends 2030* an evolving pattern of conflict based upon historical trends can be discerned and the implications for the DoD ascertained.

Conclusions

There are three critical takeaways from this paper. The first is that the societal problems that have led to the breakout of wars can be tackled at their root cause, albeit, not solely be the DoD. The societal change exhibited by the *levée en masse* is being repeated globally today by the proliferation of information technology and is articulated here as the diffusion of power and empowerment of the individual. The only way to tackle these wicked problems is to build
socially complex planning groups using design methodologies to build a fuller picture of the problem set and paths to resolution than we do today.

The second takeaway is a warning to both statesmen and military planners and involves the recognition of the core characteristics of a wicked problem. In using force to tackle future conflict scenarios we must recognize that the problem has no stopping rule, therefore, we must not advocate red-lines nor strict termination criteria. Recognizing that societal issues are wicked problems means recognizing the danger of setting deterministic waypoints. Controlling expectations and the strategic narrative are vital elements in articulating risk and articulating what can realistically be achieved.

The third and final conclusion is that the operational level of war offers the greatest opportunity for integrating IOPs by focusing strategic direction on regional matters and understanding the detailed tactical environment. While improvements are undoubtedly essential both above and below the operational level of war, there is already some capacity in existence in both that would be energized by a GCC style all-of-government organization.

**Recommendations**

While a sweeping assessment, it is critical that the United States undertake a Congressional study toward a Defense Reorganization Act. Where in the past such studies have changed the role of the Secretary of Defense, role of the Chairman of the Joint Chief of Staff or institutionalized joint activity, today’s challenge is institutionalizing an inter-agency approach at the operational level. Left to its own devices, the DoD has fallen foul of Maurice de Saxe’s prediction, hence a change to the statute is essential. A future Defense Reorganization Act should probe the role of the Geographic Commander and his utility; the US Constitutional authorities granted to US military and intelligence agencies in an environment of dual-use civil and military
capabilities, and the institutional structures needed to integrate all IOPs at the operational level under civilian control.

The second critical recommendation is a change to the planning methodology used for resolving wicked problems. While a Defense Reorganization Act would institutionalize the organizational changes needed to bring social complexity to societal problems, unless a conceptual change is made, overly deterministic and linear methods of planning will continue. Design and Operational Art must be taught at PME establishments as part of the core curriculum for all military and Other Government Agency officers at and above Field Grade. Unless the United States builds an appreciation of complex adaptive problems and their resolution, change in the interagency construct will not be equal to the challenge of the future operating environment.

**The Bottom-line**

The United States faces a turbulent time over the coming years in determining when and how to apply its preponderance of military power to the crises that will unfold. While there will be a place for zero-sum engagements, they will not be the norm. The diffusion of power and the empowerment of individuals mean that compellence will not be the sole preserve of states. To resolve complex societal problems the United States must operationalize the interagency process to bring social complexity and relevant expertise to problem framing and solving. By forming an organization at the operational level of war to integrate the IOPs, the United States can exploit the synergies that can be generated to shape its environment and gain an enhanced understand of evolving crises. Only through a greater understanding of its environment can the United States
bring the optimal combination of IOPs to bear to achieve satisfactory solutions to the wicked problems that it will face.

Notes

2 Full transcript of Kerry, Dempsey and Hagel testifying to http://www.washingtonpost.com/politics/running-transcript-senate-foreign-services-committee-hearing-on-syria/2013/09/03/35ae1048-14ca-11e3-b182-1b3bb2eb474c_story.html
3 Clausewitz, OnWar, 75.
4 Watts, Clausewitzian Friction and Future War, 13.
5 Clausewitz, OnWar, 75.
6 Ibid, 87.
7 Bacevich, The Limits of Power, 163.
8 Smith, The Utility of Force, 1.
9 Ibid, 3.
10 NIC, Global Trends 2030, ii.
11 Watts, Clausewitzian Friction and Future War, 7
13 Clausewitz, OnWar, 610.
15 Rittel and Webber, Dilemmas in a General Theory of Planning, 155.
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18 Rittel and Webber, Dilemmas in a General Theory of Planning, 162.
19 Wass de Czege, Operational Art, 53.
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21 Ibid, 10.
22 Conkin, Wicked Problems and Social Complexity, 17.
23 Schwartz, Art of the Long View, 227.
24 Wass de Czege, Operational Art, 48.
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26 Krepinevich, Strategy in a time of Austerity, 64.
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